either the document referenced in paragraph (a)(1) of this section or the applicable document referenced in paragraphs (a)(2) through (a)(4) of this section. These documents are incorporated by reference in accordance with 5 U.S.C. 552(a). The documents contain specifications, standards and general requirements applicable to shipboard radar equipment and shipboard radar installations. For purposes of this part, the specifications, standards and general requirements stated in these documents are mandatory irrespective of discretionary language. Radar documents are available for inspection at the Commission Headquarters in Washington, DC, or may be obtained from the Radio Technical Commission for Maritime Services (RTCM), P.O. Box 19087, Washington, DC 20036.

(1) Radar installed on ships of 500 gross tons and upwards on or after July 1, 1988, must comply with the provisions of RTCM Paper 133–87/SC 103–33 including Appendix A. Title: ''RTCM Recommended Performance Specification for a General Purpose Navigational Radar Set for Oceangoing Ships of 500 Gross Tons and Upwards for New Radar Installations.'' Title of Appendix A: ''General Purpose Shipborne Navigational Radar Set for Oceangoing Ships *Design and Testing Specifications.*'' Document originally approved by RTCM August 15, 1985 and revised May 15, 1987.

(2) Radar installed on ships of 1,600 gross tons and upwards on or before April 27, 1981, must comply with the provisions of Volume II of RTCM Special Committee No. 65 Final Report; Part II. Title: ''Performance Specification for a General Purpose Navigational Radar Set for Oceangoing Ships of 1,600 Tons Gross Tonnage and Upwards for Ships Already Fitted.'' Document approved by RTCM July 18, 1978; effective as FCC requirement on April 27, 1981.

(3) Radar installed on ships of 1,600 gross tons and upwards after April 27, 1981 and before July 1, 1988, must comply with the provisions of Volume II of RTCM Special Committee No. 65 Final Report with Change 1 entered; Part I including Appendix A. Title: ''Performance Specification for a General Purpose Navigational Radar Set for Oceangoing Vessels of 1,600 Tons Gross Tonnage and Upwards for New Radar Installations.'' Title of Appendix A: ''General Purpose Shipborne Navigational Radar Set for Oceangoing Ships *Design and Testing Specifications.*'' Document approved by RTCM July 18, 1978; effective as FCC requirement on April 27, 1981.

(4) Ships between 500 and 1,600 gross tons constructed on or after September 1, 1984, with radar installed before July 1, 1988, must comply with Regulation 12, Chapter V of the Safety Convention and with the provisions of Inter-Governmental Maritime Consultative Organization (IMCO) [Now International Maritime Organization (IMO)] Resolution A.477(XII). Title: ''Performance Standards for Radar Equipment.'' Adopted by IMCO November 19, 1981.

(b) For ships of 10,000 gross tons or more and any other ship that is required to be equipped with two radar systems, each of these systems must be capable of operating independently and must comply with the specifications, standards and general requirements established by paragraph (a) of this section. One of the systems must provide a display with an effective diameter of not less than 340 millimeters (13.4 inches) (16-inch cathode ray tube). The other system must provide a display with an effective diameter of not less than 250 millimeters (9.8 inches) (12-inch cathode ray tube).

(c) Recommendations for tools, test equipment, spares and technical manuals are contained in Part IV of Volume III of the RTCM SC–65 Final Report approved by RTCM July 18, 1978.

[52 FR 35247, Sept. 18, 1987]

§ 80.826 Interior communication systems.

(a) An interior communication system must be provided between the bridge of the ship and the radiotelegraph operating room in all cases where the radiotelegraph operating room does not adjoin or open onto the navigating bridge structure. An interior communication system must also be provided between the bridge and the location of the radio direction finding apparatus whenever the latter is not located on the bridge or within any

compartment adjoining or opening onto the navigating bridge structure. If the operating position of the reserve radio installation is not located in the room normally used for operating the main radio installation, an interior communication system must be separately provided between the bridge and each of these radio operating positions.

(b) If a vessel has more than one location from which it is normally controlled and steered, the interior communication system between the radiotelegraph operating room and bridge must include communication to each such location. The existence at a location of all of the following factors will require that a point of communication be established there: (1) A steering wheel; (2) a compass; (3) an engine order telegraph; (4) control of the whistle; and (5) a wheelhouse enclosure.

(c) Paragraph (b) of this section does not apply to locations established solely for emergency use in event of failure of the normal steering facilities or locations used solely while docking or maneuvering a ship while in port or for brief periods while navigating the ship in close quarters on inland waters.

§80.827 Requirements for interior communication systems.

The interior communication systems required by §80.826 must provide two-way calling and voice communication, be independent of any other communication system in the ship, and be of a type approved by the United States Coast Guard. The location and termination of individual systems is subject to approval by the Commission.

§80.828 Radiotelegraph station clock.

A working clock equipped with a sweep seconds hand and having a dial not less than 12.7 cm (5 inches) in diameter, the face of which is marked to indicate the silence periods prescribed for the radiotelegraph service by the International Radio Regulations, must be provided. It must be securely mounted in the radiotelegraph operating room in such a position that the entire dial can be clearly observed by the radio officer from the normal radiotelegraph operating position, from the operating position where the international radiotelegraph alarm signal would ordinarily be transmitted by hand, and from the position used for testing the auto alarm (if installed). If a separate emergency radiotelegraph operating room is provided, the requirements of this section apply to it also.

[51 FR 31213, Sept. 2, 1986, as amended at 58 FR 44953, Aug. 25, 1993]

§80.829 Survival craft nonportable radiotelegraph installation.

(a) A survival craft nonportable radiotelegraph installation required by law to be provided in a motor lifeboat must include the following components as a minimum:

(1) A transmitting and receiving antenna and antenna accessories,

(2) An artificial antenna for testing purposes;

(3) A transmitter with keying arrangements for use of radiotelegraphy, an associated radio receiver with headphones, and a suitable device for converting from the power supply battery voltage to the voltages used by the transmitter and receiver;

(4) A power supply;

(5) A device for a ground connection to the water when the lifeboat is afloat.

(b) Components of a survival craft nonportable radiotelegraph installation specified in paragraph (a)(2) of this section must be certificated of §§80.263 and 80.265.

(c) The radiotelegraph equipment must be installed in a cabin large enough to accommodate both the equipment and the person using it. The operation of the radiotelegraph installation must not be interfered with by the survival craft engine while it is running, whether or not a battery is on charge.

(d) The antenna must be a single wire inverted L type with a horizontal section of the maximum practicable length and a height above the mean waterline of not less than 6 meters (20 feet), and must be so designed that it can be quickly erected and utilized by a person in the lifeboat while afloat.

(e) The ground system must comply with the following requirements:

(1) The radio installation when installed in a metal hull lifeboat must be grounded to the hull of the lifeboat.